**WHAT IS CLAIMED IS:**

1. An apparatus for increasing channel capacity of a mobile communication system, comprising:

a control device to check a sequence of walsh codes from a plurality of channels and to select a set of complex functions output from a walsh rotator based on the sequence of the walsh codes.

2. The apparatus of claim 1, wherein the sequence of the walsh codes includes one of identical sequences which are all identical as even or odd numbers and different sequences.

3. The apparatus of claim 1, wherein the sequence of the walsh codes comprises one of all even numbers, all odd numbers, and a combination of even and odd numbers.

4. An apparatus for increasing channel capacity of a mobile communication system, comprising:

a walsh code control unit to check sequences of walsh codes respectively outputted from a first walsh code unit and a second walsh code unit;

a walsh rotator to generate and output a plurality of repeated complex functions; and

a rotator control unit to select the repeated complex functions output from the walsh rotator based on the sequences of the walsh codes outputted from the first walsh code unit and the second walsh code unit.

5. The apparatus of claim 4, wherein the walsh code control unit is connected to the rotator control unit and transmits a status of the walsh code that is output from the first and second walsh code units.

6. The apparatus of claim 4, wherein the walsh code control unit outputs a first repeated complex function to the walsh rotator when the walsh codes output from the first walsh code unit and the second walsh code unit are one of all even number and all odd number sequences, and outputs a second repeated complex function to the walsh rotator when the walsh codes output from the first walsh code unit are one of even number and odd number sequences and the second walsh code unit are one of odd number and even number sequences respectively.

7. The apparatus of claim 6, wherein the first repeated complex function is Is={1, 1}, Qs={1, -1}.

8. The apparatus of claim 6, wherein the second repeated complex function is Is={1, 1}, Qs={1, 1}.

9. An apparatus for increasing channel capacity of a mobile communication system, comprising:

a walsh code control unit to check sequences of walsh codes respectively output from a first walsh code unit and a second walsh code unit;

a first adder and a second adder to respectively add the walsh codes output from the first walsh code unit and the second walsh code unit and data input through a first channel path and a second channel path;

a walsh rotator to output a plurality of repeated complex functions;

a first multiplier and a fourth multiplier to multiply of one of the repeated complex functions of the walsh rotator and a complex data signal of the first adder;

a second multiplier and a third multiplier to multiply one of the repeated complex functions of the walsh rotator and a complex data signal of the second adder;

a first sum unit to output an I signal by summing output signals of the first and second multipliers;

a second sum unit to output a Q signal by summing output signals of the third and fourth multipliers; and

a rotator control unit to select one of the plurality of repeated complex functions output from the walsh rotator based the sequences of the walsh codes output from the first walsh code unit and the second walsh code unit.

10. The apparatus of claim 9, wherein the rotor control unit outputs a repeated complex function of Is={1, 1}, Qs={1, -1} when the sequences of the walsh codes

respectively output from the first and second walsh code units are all one of even number and odd number sequences.

11. The apparatus of claim 9, wherein the rotor control unit outputs a repeated complex function of ls={1, 1}, Qs={1, 1} when the sequences of the walsh codes respectively output from the first and second walsh code units are different even number and odd number sequences.

12. A method for increasing channel capacity of a mobile communication system, comprising:

checking sequences of walsh codes of a plurality of channels; and

performing complex scrambling by selectively outputting a set of a repeated complex function according to the sequences of the walsh code.

13. The method of claim 12, wherein checking the sequences of the walsh code comprises:

determining whether the sequences of the walsh codes are all one of even and odd number sequences; and

determining whether the sequences of the walsh codes are different even and odd number sequences.

14. The method of claim 13, wherein when the sequences of the walsh codes are all one of even and odd number sequences, complex scrambling is performed by using a first repeated complex function.

15. The method of claim 14, wherein the first repeated complex function is Is={1, 1}, Qs={1, -1}.

16. The method of claim 13, wherein when the sequences of the walsh codes are different even and odd number sequences, complex scrambling is performed by using a second repeated complex function.

17. The method of claim 16, wherein the second repeated complex function is Is={1, 1}, Qs={1, 1}.

18. A method for increasing channel capacity of a mobile communication system, comprising :

checking sequences of walsh codes output from first and second walsh code units;

determining whether the sequences of the walsh codes are all one of even and odd number sequences;

determining whether the sequences of the walsh codes are different compositions of even and odd number sequences; and

selectively outputting a repeated complex function set according to the determination result.

19. The method of claim 18, wherein selectively outputting comprises:

outputting a first repeated complex function when the sequences of the walsh codes are all one of even and odd number sequences; and

outputting a second repeated complex function when the sequences of the walsh codes are different even and odd number sequences.

20. The method of claim 19, wherein the first repeated complex function is Is={1, 1}, Qs={1, -1}.

21. The method of claim 19, wherein the second repeated complex function is Is={1, 1}, Qs={1, 1}.